

ABSTRACT OF THE DISCLOSURE

A high-speed turbo decoder using a BCJR (Bahl, Cocke, Jelinek, and Raviv) algorithm or a BCJR algorithm which makes approximation by ACS computation (Add-Compare-Select computation) includes a means for supplying a plurality of pipelined stages of gamma metrics as a section for performing at least one of alpha metric computation and beta metric computation in the BCJR algorithm, an ACS computation means which is constituted by a plurality of stages of cascade connections and receives the plurality of pipelined gamma metrics, a means which receives a computation result obtained by the ACS computation means and updates state metrics every plurality of stages (K stages), and a memory for storing state metrics for every K stages.